

In the Claims:

1-18. (Canceled)

19. (Original) A circuit for use in providing an additional channel comprising:

a sync and tracking unit coupled to a transmission input, the sync and tracking unit containing circuitry to synchronize the circuit to a timing of a transmission provided by the transmission input;

a matched filter coupled to the sync and tracking unit, the matched filter containing circuitry to determine the timing of the transmission;

a subframe generator containing circuitry to create a data unit for transmission on the additional channel; and

a data generation unit coupled to the transmission input, the sync and tracking unit, and the subframe generator, the data generation unit containing circuitry to encode and modulate the data unit and to insert the data unit into the transmission.

20. (Previously Presented) The circuit of claim 19, wherein the timing is a frame timing, and wherein the data unit is a frame.

21. (Previously Presented) The circuit of claim 19, wherein the timing is a slot timing, and wherein the data unit is a slot.

22. (Original) The circuit of claim 19, wherein the sync and tracking unit comprises:

a sequence register coupled to the matched filter, the sequence register containing a sequence that is based on channelization code of a stronger of two branches in the transmission;

a pulse shaping filter coupled to the transmission input and the matched filter, the pulse shaping filter to decode the transmission; and

a timing tracking unit coupled to the data generating unit, the time tracking unit containing circuitry to adjust sample timing of the data generating unit to keep it in sync with the transmission's timing.

23. (Original) The circuit of claim 22, wherein the sequence stored in the sequence register is the conjugate of a point wise product of the scrambling code and a channelization code of the stronger of the two branches.

24. (Original) The circuit of claim 22, wherein the sync and tracking unit can keep track of a shifting transmit timing in the transmission.

25. (Original) The circuit of claim 19, wherein the matched filter descrambles the transmission with a sequence based on a channelization code of a stronger of two branches in the transmission.

26. (Original) The circuit of claim 19, wherein the data generation unit adds the encoded and modulated data unit with the transmission.

27. (Original) The circuit of claim 26, wherein the data generation unit scrambles, gain modifies, and spreads the data unit with a channelization code and a scrambling code provided by a scrambling code generator.

28. (Original) The circuit of claim 19, wherein when there is no data unit to transmit, no data units are inserted into the transmission.

29. (Currently Amended) A wireless device comprising:

a modem coupled to a radio frequency (RF) circuit, the modem containing circuitry to encode and modulate a first data stream to provide to the RF circuit for data transmission

purposes and demodulate and decode a first received signal from the RF circuit for data reception purposes, wherein the modem implements a first version of a technical specification for the modem data transmission and reception;

a coprocessor coupled to an output of the modem and to the RF circuit, the coprocessor containing circuitry to encode and modulate a second data stream to provide to the RF circuit for data transmission purposes and demodulate and decode a second received signal from the RF circuit for data reception purposes, wherein the coprocessor implements a second version of the technical specification for the coprocessor data transmission and reception; and

the RF circuit, wherein the RF circuit contains circuitry to wirelessly transmit the first and second data streams and wirelessly receive the first and second received signals.

30. (Original) The wireless device of claim 29, wherein the second version of technical specification is a superset of the first version of the technical specification.

31. (Original) The wireless device of claim 30, wherein the coprocessor implements a portion of the second version of the technical specification not included in the first version of the technical specification.

32. (Previously Presented) The wireless device of claim 29, wherein the coprocessor comprises:

a sync and tracking unit coupled to the modem, the sync and tracking unit containing circuitry to synchronize the circuit to a timing of a transmission provided by the modem;

a matched filter coupled to the sync and tracking unit, the matched filter containing circuitry to determine the timing of the transmission;

a subframe generator containing circuitry to create a data unit for transmission on the

additional channel; and

a data generation unit coupled to the transmission input, the sync and tracking unit, and the subframe generator, the data generation unit containing circuitry to encode and modulate the data unit and to insert the data unit into the transmission.

33. (Original) The wireless device of claim 29, wherein the wireless device is used in a wireless communications system.

34. (Currently Amended) ~~The wireless device of claim 33, wherein the wireless communications system is~~ A wireless device comprising:

a modem coupled to a radio frequency (RF) circuit, the modem containing circuitry to encode and modulate a first data stream to provide to the RF circuit for data transmission purposes and demodulate and decode a first received signal from the RF circuit for data reception purposes, wherein the modem implements a first version of a technical specification for the modem data transmission and reception;

a coprocessor coupled to the modem and the RF circuit, the coprocessor containing circuitry to encode and modulate a second data stream to provide to the RF circuit for data transmission purposes and demodulate and decode a second received signal from the RF circuit for data reception purposes, wherein the coprocessor implements a second version of the technical specification for the coprocessor data transmission and reception; and

the RF circuit, wherein the RF circuit contains circuitry to wirelessly transmit the first and second data streams and wirelessly receive the first and second received signals, wherein the wireless device is used in a UMTS Release 5 compliant system.

35. (Original) The wireless device of claim 33, wherein the wireless communications system is a CDMA Release C compliant system.

36. (New) The wireless device of claim 29, wherein the modem is coupled to the RF circuit via a multiplexer.

37. (New) The wireless device of claim 36, wherein the multiplexer is located inside the coprocessor.

38. (New) The wireless device of claim 34, wherein the second version of technical specification is a superset of the first version of the technical specification.

39. (New) The wireless device of claim 38, wherein the coprocessor implements a portion of the second version of the technical specification not included in the first version of the technical specification.

40. (New) The wireless device of claim 34, wherein the coprocessor comprises:

a sync and tracking unit coupled to the modem, the sync and tracking unit containing circuitry to synchronize the circuit to a timing of a transmission provided by the modem;

a matched filter coupled to the sync and tracking unit, the matched filter containing circuitry to determine the timing of the transmission;

a subframe generator containing circuitry to create a data unit for transmission on the additional channel; and

a data generation unit coupled to the transmission input, the sync and tracking unit, and the subframe generator, the data generation unit containing circuitry to encode and modulate the data unit and to insert the data unit into the transmission.